

Development Finance

Development through a “Big Push” and the Role of the Development Finance Institutions in Europe

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Development Finance

The Big Push Theory and the Development Finance Institutions in Europe

“
UN, OECD, AND NEPAD CALL FOR DEEPER ECONOMIC DIVERSIFICATION IN AFRICA

“A recent report jointly produced by the UN, the OECD, and NEPAD argues that African economies are dependent on too few export commodities and sectors. This makes them vulnerable to variable commodity prices on the demand side and extreme weather events such as droughts and floods on the supply side” (Karim Dahou and Dambudzo Muzenda, OECD November 2010)

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Summary

Rosenstein-Rodan and Nurkse laid the foundations for what came to be “the Big Push Theory”. A major concern for developing countries is low purchasing power and small markets for consumption goods that follows from this. The markets are therefore not able to attract investments, because no firm alone will be able to survive in the market. Rosenstein-Rodan’s main argument was that what holds for a single firm alone, does not have to hold for many firms investing simultaneously. The Big Push theory argues that there are several channels outside of just profits through, which spillover effects can work from one firm to another. In an indirect way, these external economies lead to higher profitability, and several firms will be able to be profitable together. Inducing a coordinated large-scale investment into several complementary industries, which reflects the consumption pattern in the market, will push the economy into industrialization. The workers of the firm will be the consumer of its goods, as well as others, creating a larger market for all.

Murphy, Schleifer and Vishny (1989) analyzed more formally how the spillover effects and expectations of industrialization created a situation with multiple equilibria. When for instance higher wages are paid in the industrialized sector, this results in higher purchasing power. The assumption that consumption patterns are diversified, will lead to increased demand for different complementary consumption goods. This enhances the incentives of firms from several sectors to establish production and pay wage-premiums, further enlarging the market. The theory argues that there is a coordination failure in the market, when the unindustrialized countries do not reach the better equilibrium of higher economic growth. The coordination failure occurs, since the firms are not able to industrialize simultaneously on its own under such circumstances. It opens for a normative role as social planner, who coordinates the agents in such a way that the economy reaches the desired equilibrium.

The Government can try to encourage firms to invest; yet they are not always reliable for finance support. Hence, other investors contributing with Foreign Direct Investments (FDIs) are also an important source of finance. This thesis discusses how Development Finance Institutions (DFIs) possibly can coordinate and influence the chance of achieving a push in the economy. DFIs are risk-capital investment funds, which invest in the private sector of

developing countries. The objective is to create sustainable businesses and impact the development process in the countries through its investments. Financial markets in underdeveloped countries are struggling to attract FDIs from commercial investors, because they are perceived as high-risk markets and have very low economic growth. Every one of the European investment funds is individually different. They share, however, a common ground by classifying themselves as DFIs, and as a part of the European Development Finance Institution (EDFI).

Initially, the DFIs are bounded by their mandate and the interests of their shareholders. They are at any time juggling the targets of achieving sustainable businesses and diversifying financial risk, and at the same time trying to impact development. This twofold objective characterizes the DFIs and lays the foundation for what they can achieve. Still, they stand out from other commercial investors, in the sense that they are willingly to take higher risk in their portfolio, due to the fact that they are trusted with resources for this purpose. Therefore, the DFIs can take on a more active position as investor, taking actions and signaling the opportunities, and influencing the factors that prevents an economy from reaching this better equilibrium.

The first issue that I discussed is the inability to industrialize, because of coordination failure between firms and producers of social overhead capital. Social overhead capital is important for enabling the market to function, when at the same time the producers are met by unsecure demand in the future. DFIs can influence both parties by acting as a relatively large company that enters the market first. More specifically, they can demand a minimum amount of social overhead capital for a high price, such that production of social overhead capital is sustainable for the producer.

Furthermore, the fund can be a credible first mover into the market. Through its investments and willingness to take risk, the DFI signals how it perceives the expected returns in the market in general. This can alter expectations among other potential investors. Moreover, the higher purchasing power of the workers at the larger firm will alter the demand for several consumer goods. The presence of social overhead capital has in addition altered the costs for other firms, increasing their profitability. Taking these considerations into account,

the DFIs impact through their investments the economy's ability to move towards an industrialized equilibrium through a push investment.

Technology and knowledge spillovers impact far beyond just the production taking place within the firm. DFIs and its co-investors are able to transfer new production methods and innovations to an economy characterized by primitive and low-efficient production. Liu (2004) points out that FDI have different impacts in the short-and long-run, and that the long-run costs incurred in the beginning stages are outweighed by the long-term benefits. The vertical effect is more uncertain, since sophisticated inputs take time to establish and depend on the scale of production. Impacts within the labor market are also important for the level of purchasing power within the economy. Nonetheless, if economic growth is spurred by increase in productivity, then the amount of working opportunities are not as large as it might seem *prima facie* from such a development.

Although the possibilities are many, attempts to initiate or contribute to such a process, does not come without challenges. It rests on the assumption that the spillover effects are strong enough to influence the perceptions and expectations that are present among the businesses. If the assumption that industrialization happens simultaneously is not upheld, firms may wait until the first one, possibly the DFI, succeed. Investors will not be willing to set forth their own investments until they see success. Introducing the aspect of time into the Big Push model is one of the elements that can make the theory fall apart.

When the financial crisis hit the largest capital markets in 2008, the amount of Foreign Direct Investments (FDIs) flows into developing countries fell in many of these countries. This has affected the access firms in these markets have to financing investments, despite the fact that developing countries have not been hit as hard by the financial crisis as the more global markets. Commercial banks and investors have increased their aversion to risk and have fled to what they perceive as safer markets. The European DFIs will have to try even harder at signaling the attractiveness of these markets, despite of the crisis.

Preface

I remember, when being in Uganda in 2008, listening to a Norwegian woman working on behalf of Norfund on the Bugoye hydropower project in West-Uganda. She told us about how they had a long time ahead of the project been in contact with the local community and talked to them about how they were not “stealing” the river from the people depending on it. They were rather borrowing it, making a detour of the river that was going to pass through turbines producing electricity, and the river would be reunited with the main river further down. The local population would be able to continue using the river like they always had. In addition to having to gain trust among the local population, Norfund and its co-investor TrønderEnergi had to send back and forth with postal services approximately five hundred documents between Norway and Uganda before they could start the project. The project illustrates the amount of patience and will that is needed in order to set forth investments in developing countries. But that does not mean it is not possible. Norfund and its co-investor were determined to go through with the project and knew that they would have to assume a long-run position in the project given their financial support and expertise in hydrology. Rome wasn’t built in a day.

The result is that people who are taking education can study and do their homework after the break of dark.

I would like to thank my supervisor, Tapas Kundu for inspiring discussions and constructive feedback on my work. Thank you for getting me back on track when I felt I was lost in the discussion. I also send a thank you to Rasmus Bøgh Holmen for proofreading my thesis and all my mistakes. Lastly, I thank my dear boyfriend and cohabitant, Anders, for supporting me through, not only this process, but all the years I have been busy with my studies. It has been of great value for me to come home to someone who wants to talk about everything else but studies, getting my mind off school and obligations for a while.

Mistakes or other errors in the thesis are, of course, my responsibility alone.

May 2011,

Marianne Fiedler Rørvik

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1 Introduction

Economic growth is a new phenomenon compared to world history. It was not until the industrial revolution in Britain that it came to be in what became the first countries of the developed world. However, the development seemed rather skewed and was not experienced the world over. It was not until after the World War Two and the end of colonialism that many countries in what is sometimes called the Third World experience growth (Ray 1989). In the aftermath, the underdeveloped countries at that time have had different fates. Even though there are many countries that were able to lift themselves into prosperity, we can today observe that there is still a large group of countries, who are struggling with low economic growth, high level of unemployment and low levels of wealth. Large parts of the population are living from day to day in order to survive on the income that they are able to earn. Large efforts have been made by the international community in terms of aid and financial resources, but the assistance has not been enough to help countries in the long-run to a significant extent.

Growth Economics

Parallel to the developments in the real world, the research within economic development has been developing, influenced by the thinking of its time. In the time of Ricardian trade theory, neoclassical theory and new growth economics were at each end of the debate. Within growth economics, there also spun a debate around whether balanced or unbalanced growth was the best strategy for industrialization in underdeveloped countries (Kregel 2007). The balanced growth, first and mostly advocated through Rosenstein-Rodan's "Big Push" theory, Ghatak (2003) presents as a theory that promotes a broad based investment in complementary industries, exploiting externalities between the firms in different industries in a way that removes "the bottlenecks on the demand side imposed by the narrow size of the markets" and each firm catering for each other. The aim of the theory is to solve the problem of coordination that is present in the market and holds the country back from economic development. A precise definition will be presented later in the thesis. Unbalanced growth, advanced by Hirschman and Streeten, rests on the argument that Least Developed Countries (LDCs) need help to economize "genuine decision making".

Thus, growth should be unbalanced. LDCs are defined by the UN as gross income per capita (GNI) of under \$905 and are graduated out of the classification when GNI is above \$1086 in addition to various human factors, like health and education, and degree of economic vulnerability.¹ Hirschman further argues that growth should be based on shortages, because challenges will generate its own response. External diseconomies must be minimized and excess capacity in social capital is seen as wasteful and must be avoided (ibid).

The main critique from the one side towards balanced growth was that, given an assumption of fixed supply factor and the full use of them, inflation would materialize, when several industries expand at the same time. There would be a lack of balance between demand and supply. Furthermore, LDCs lack the skills and knowledge to handle the planning required to going through with it. Moreover, the process will be costly them, both in real and monetary terms (ibid). The critique towards unbalanced growth has been that industrialization of a few sectors might be insufficient for spurring economic growth. “There is always the danger of putting all eggs in one basket” and not benefitting from industrialization, due to lack of diversification (ibid).

When presenting the theories Ghatak (2003) argues that in many ways these two directions within growth economics can be complementary. Both have the perception that industrialization is the best and most efficient means of spurring economic growth. Another similar connection is the focus on certain activities depending on comparative advantages, which both theories realize needs planning and organizing to succeed. In my thesis the focus is on the balanced growth version, particularly the “big push theory” and the way they portray the process of economic growth and the means to move out of a development trap. In the context of the thesis, it is the corresponding mechanisms that are of interest, and the phenomenon that I have chosen to look at in comparison to the theory.

The European Development Finance Institutions

The Development Finance Institutions (DFIs) in Europe are risk capital management funds. These invest into capital markets that are not perceived as attractive, because of high level

¹ UN LDC Criteria for identification: <http://www.unohrrls.org/en/ldc/related/59/> (accessed 25.04.2011) See list in table 2 in Appendix.

of financial risk and thus not able to attain financial resources. Securing access to financing for businesses can create developing and thriving markets in such countries, leading to industrialization and higher wealth within the society.

First originating more as an investment fund for finding good opportunities for its home country, the European DFIs have now a stronger focus on gaining large development impacts through their investments. The oldest Development Finance Institution is United Kingdom's DFI, Commonwealth Development Corporation (CDC).² When founded in 1948 its initial purpose was to generate investment opportunities in the different parts of the former British colonial areas of Commonwealth. Sixty years later they are involved in 798 companies, ranging over 71 countries with one of the largest portfolio of 3.3 billion euro at the end of 2009 (CDC Development Report 2009). Later on, in the 60's, both Germany and Denmark established their own government investment funds and around 1980 several more were established. In 1992 the European Development Finance Institution, EDFI, was founded as an association of all the European development funds. It "strives to strengthen information flow and cooperation between its members and other bilateral, multilateral and regional development finance institutions", which is its main objective.³

Norfund, which is the government-owned Norwegian Investment Fund for Developing Countries, was created by the Norwegian Parliament, Stortinget, and placed under the Ministry of Foreign Affairs in 1997. The Norwegian DFI was then formed as a company placed under a special law, the Norfund act. Within the end of 2009 Norfund owned in own capital about 5.8 billion. Today it is a much more mature fund, with new investment projects each year and more for each year. In 2009 the number of new investments was 81, up from 69 in 2008 (Norfund 2010). Incident of

In my thesis I will discuss the role of the European DFIs in the event of achieving economic growth through a "big push", leading to a virtuous spiraling process, where the economy moves towards a good equilibrium; the industrialized one. Multiple equilibria are possible at the same time given the presence of spillover effects and expectations, which can be

² Formerly named the Colonial Development Corporation

³ EDFI: <http://www.edfi.be/about/edfi.html>

impacted by the actions of the DFIs. There are several similarities in the way both the big push approach and the European DFI approach want to achieve development and economic growth. For Rosenstein-Rodan's big push theory, solving the issue of coordination and surmounting the indivisibilities is the main goal. Both the big push theory and the phenomenon of the European DFIs are almost just as old, and still today the issues that they address are just as relevant as back then.

The next part of the thesis, section 2, presents the big push theory and the discussion that has formed it. In section 3, I present the European DFIs and draw the main characteristics of the investment funds, their objectives, and how they intent to achieve them. Section 4 is my main discussion on which channels of spillover effects the DFIs can most likely influence, given their mandate and way of investing. I try to answer the question of what makes them able to influence a process like the big push development. Section 5 is a further discussion on the effects that the financial crisis has induced, and how this has possibly altered the role of the DFIs. Section 6 concludes the main findings of my discussion.

2 The Big Push Theory

2.1 Establishing the Theory, Rosenstein-Rodan's Big Push

"Launching a country into self-sustaining growth is a little like getting an airplane off the ground. There is a critical ground speed which must be passed before the craft can become airborne." (Rosenstein-Rodan 1966)

The theory of the big push goes some seventy years back in the history of development economics and the discussions that have influenced this field of research. The renowned economist within development economics, Rosenstein-Rodan, introduced the term, when writing the article *"Problems of Industrialization of Eastern and South-Eastern Europe"* in 1943.

He points out two different ways in which the region can be industrialized. On the one hand, it can industrialize by itself without economic help from others. This involves raising capital on its own and organizing several industries in a vertical fashion, from heavy machine industry to light consumer oriented industries. In this incident, it therefore "aims at self-sufficiency". Rosenstein-Rodan presents this as the autarkic way of industrialization. On the other hand, it could achieve industrialization through "substantial international investments or capital lending" and thereby open the area for the world economy (Rosenstein-Rodan 1943, p202).

The latter method has several advantages compared to the first one. Rosenstein-Rodan argues that the process of industrialization through international investments will move faster and result in larger benefits for the consumers. This follows from the autarkic industrialization; achieving self-sufficiency will take time as a result of difficulties of raising capital. Given a fixed amount of capital, increasing domestic investments must involve more saving of the population and a decrease of "consumption and standard of life" in the current period. Such division between consumption and saving constitutes a time consuming process and a large sacrifice for individuals, who already have scarce resources and living in a non-industrialized country. In addition, he points out less efficient international division of

labor and increase in excess capacity of heavy industries, as negative implications from developing independently of the international community (Rosenstein-Rodan 1943). Thus, a more international integration of Eastern and South-Eastern Europe would contribute to a more efficient division of labor through allocation of excess labor in the agrarian industry into labor-intensive, light industries. Next, the reallocation will reduce the burden of its residents.

When international investments are secured, the plan suggested by Rosenstein-Rodan was then to induce a coordinated large scale investment into several industries simultaneously. These investments should, according to the author, be planned like the industrialization of a huge firm or trust by an overarching institutional framework different from what was already in place. There are several reasons why he put forth this solution, and the argumentations led to the establishment of the big push theory.

An elaborate account was written in the aftermath of a development discussion between several economists in Latin America. Here he illuminated some assumptions forming the big push theory. Rosenstein-Rodan (1966) postulated that given the imperfections in the investment market, such as imperfect knowledge and risk, incorporated into the theory were some main indivisibility which affected the patterns of the growth. Indivisibility means there is a minimum level below which economies of scale and scope is unavailable. What is more, affecting the extent to which the push of development through investments could happen.

The most fundamental one, according to Rosenstein-Rodan, was the indivisibility of the production function. More specifically, he pointed out the indivisibility of inputs called “social overhead capital” like power, transport and communication, which created increasing returns to scale. Scale-opportunities were either exploited by a few firms expanding their production or by increasing the number of companies in all industries (Rosenstein-Rodan 1966). Because of the indivisibility and scale possibilities, it also became the most important source of external economies on the supply side. External economies are cost-saving benefits that spring out from the establishment of new businesses and takes place outside of the control of the firm. Technology, knowledge and skilled labor are some examples. They are either external to firms within the same growing industry or external to another

industry, given the industrialization of this particular sector (ibid 1943). Taken its role in to account as a source for external economies, social overhead capital constitutes, simultaneously, one of the main difficulties to achieving development.

“...a high initial investment in social overhead capital must either precede or be known to be certainly available in order to pave the way for additional more quickly yielding directly productive investments. This indivisibility of social overhead capital constitutes one of the main obstacles to development of under-developed countries” (Rosenstein-Rodan 1966, p61)

What is fundamental about this type of capital is that it leads to indivisibilities in two other variables namely demand for investments and the supply of savings, which would not have been there otherwise. I will comment on the first.⁴

Regarding the demand of investments, decisions are not made independently of other investments. The risk involved is related to the uncertainty as to whether there is a market for their product. When a new business enters the market on its own, it will need to rely on the workers using all their wages on the goods produced by them. This kind of relation seems unreasonable to assume, and the market will be too small for the company to earn positive returns. The next key argument of Rosenstein-Rodan is that what holds for one company need not be the reality, when several producers invest simultaneously. Investing through a large scale industrialization of complementary industries induces the workers at each company to spread its consumption across the different consumer goods. The diversion of the workers' consumption is done in a way that creates a larger market of demand for all and enabling economies of scale. It is an illustration of what Rosenstein-Rodan calls the “complementary system of demand”. “The new producers will be each other's customers and will verify Say's law⁵ by creating an additional market” (ibid, p62). This is the driving force behind a “big push” development in the economy, pushing itself out of a state, where low purchasing power, and thus small markets, kept the country in an underdeveloped state.

⁴ Rosenstein-Rodan mentions the third class of indivisibilities in his paper, which regards the indivisibility of savings (Rosenstein-Rodan 1966). I will however choose not to focus on this here, since I believe it is less relevant for my discussion here.

⁵ Say's law: “Every increase of production, if distributed without miscalculation among all kinds of produce in the proportion which private interest would dictate, creates, or rather constitutes, its own demand” (Formulated here by John Stuart Mill) (Nurkse 1953, p11-12)

There is one factor however, he argues, which makes this less straight forward than what it seems *prima facie*. Complementarity of demand does not materialize itself until investments in production of various goods have reached a certain “minimum threshold”. In the case of divisible demand, where the production of one unit of any good was profitable, even quite small investments would be desirable to induce and would be capable of creating additional markets. Divisibility, however, creates large costs for the first unit produced, and one has to reach a level of the amount of produced goods in order for complementarity to manifest itself. Lack of investments that are able to cover this minimum amount of production of what he calls “wage-goods” creates also an obstacle for development (ibid).

Rosenstein-Rodan pointed out how the world market could substitute the domestic market and in effect reduce the minimum push necessary for reaching industrialization. “But it does not dispense with the need for a big push” (ibid 1966, p65). The two different indivisibilities mentioned here are in their own way contributing to the creation of external economies and as a result of this they are actively shaping “the characteristic pattern of models of growth of under-developed countries” (ibid, p65).

Scale opportunities and external economies can make businesses overcome the obstacles of small markets for their consumption goods. However, the risk and uncertainty involved entering a market that initially is non-existing, but potentially, is hard to measure and the firms lack information about possible gains and losses. There is a coordination failure pointed out by Rosenstein-Rodan, where market mechanisms are not enough to provide the information to make firms willing to go through with their investments. He was not convinced that industrialization, if coordinated, could be so by the initial organizational structure that was used to handle “too small units”. A large scale industrialization of this type was new for them. Firms are not able to take into account external economies and its advantages. Hence, they do not have full information of the possibilities existing in the market. The actual size of the potential market is not envisioned by them.

Another problematic trait cited during the formation of the big push is regarding the divergence between private and social marginal net value, also known as the Pigovian

divergence.⁶ Under the formal discussion of industrialization of Eastern and South-Eastern Europe, part of the process pictured by Rosenstein-Rodan was the change of agrarian labor into industrial workers. The social marginal product of such training and educating of labor is larger than the private marginal value and, given that a private business might not have the incentives to initiate such training. Therefore, the State was therefore seen by him as a best investor. Investing on its own, a company would not earn large enough returns on the resources used on the working force and might “lose capital if these workers contract(ed) with another firm” (Rosenstein-Rodan 1943, p205).

Complementary industrialization can be looked at as reducing the risk each business face when deciding to invest. Incentives of the private investors are of great importance. Profits are “the driving force” behind investments, and social benefits are not taken into account. Even though the investment creates benefits for the society as a whole, it is not in the interest of the company, when it does not earn positive returns on it. Thus, one expects lower rates of investments and economic growth (Rosenstein-Rodan 1943).

A coordinated industrialization of a country or an area as a big firm involves taking into account the dynamic processes happening at the same time. External economies and spillover effects are not incorporated into the profit function of the firm and neither mirrored in the market price. There is a need for an additional signaling through the coordination of a “social planner”. Individual companies should take the social marginal value of the investment into account and not just the returns on its single investment.

2.2 Balanced Growth from Nurkse

Just a decade after Rosenstein-Rodan the economist Ragnar Nurkse developed further the theory of the Big Push. Along the line of arguments made by his predecessor, Nurkse advocated for a balanced growth approach to industrialization in what he calls “backward countries”, but did not explicitly state that it would take place as a big push. He pointed out a vicious cycle on both the supply side and the demand side. Commenting on the latter case, he stated that:

⁶ Stems from the more common known Pigovian tax; a tax levied on activities that generate negative external effects. Social cost is not incorporated into the private cost of the activity.

“On the demand side, the inducement to invest may be low because of the small buying power of the people, which is due to their small real income, which again is due to low productivity. The low level of productivity, however, is a result of the small amount of capital used in production, which in turn may be caused at least partly by the small inducement to invest.” (Nurkse, 1953)

The troubles on the supply side of capital, people’s lack of ability to save, received most attention, but for Nurkse the issue was more related to the lack of incentives to invest and create production. This, as pointed out already, stemmed from the “limited size of the domestic market in the early stages of a country’s economic development” (ibid, p6).

When discussing the smallness of domestic markets, it is not the size of the country that matters but rather the extent of productivity of the working force. The size of the market is defined by the volume of production. Therefore, an increase in real income, as a result of increased productivity, is what counts. Nurkse connected the discussion up to Say’s law about how production creates its own demand, and states that the market will be larger through an increase in productivity. In the agriculture sector there was excess of potentially productive resources, which Nurkse called “disguised unemployment” that was continually increasing. In the same fashion as Rosenstein-Rodan, he argued for employing them in production of new capital goods.

Another important point mentioned by Nurkse is that, in addition to “technical discontinuities”, the markets in developing countries are characterized by inelastic demand from their low purchasing power. Moreover, these demand characteristics contributed to reducing the incentives to invest into the market.

Hence, a way out of the vicious circle for Nurkse was to increase the incentives of investments and in this way mobilizing the savings potential created by disguised unemployment (Kregel 2007). This can happen through a large scale injection of capital into several industries that are complementary, like a balanced growth. Through complementarity they create a market for one another and end up supporting each other’s sales. “People working with more and better tools in a number of complementary projects become each other’s customers” (Nurkse 1953). Consumption patterns and preferences are diversified. According to the author, the diversification should be the fundament for

choosing which industries one should invest into. “Balanced growth rests on the needs of a balanced diet”. In order to avoid too much investment in some production and too little in others, it would be necessary to know the exact mix of goods preferred by the consumers. Knowing the exact preferences increases the chance for success (Ray 1998).

Schumpeter talked a lot about the entrepreneur’s role as an innovative actor, and this is also central for how Nurkse wants to achieve balanced growth. An entrepreneur alone might not have the incentives to invest into the necessary technology and start production in small markets. In such cases can profitable use of modern technology be discouraged. Yet, similar to Rosenstein-Rodan, he points out that several entrepreneurs in complementary industries will be able to support each other and work with “more real capital per head and with greater efficiency in terms of output per man-hour” (Nurkse 1953). This gives them incentives to make the effort of investing in the initially small market, and thereby creating the spillover effects that are needed to achieve a big push.

Unlike Rosenstein-Rodan, external demand and resources was in the eyes of Nurkse not reliable as a source of capital or demand for investments in the situation of growing productivity in developing countries. Instead, he saw the enabling of unemployed productive labor as a source of “disguised saving” potential (Nurkse 1953), which could increase capital without decrease in level of consumption and without reliance on external finance. This increase in domestic saving would thus lead to developing countries embarking on internally led growth, with the state as a natural promoter. A process that is not carefree, because it depends very much on the agriculture and manufacturing sectors’ ability to improve together and the one creating inputs for the other. Once a balanced growth had been set into place, Nurkse envisioned that further developments could be made by the help of foreign capital. Firms were to invest where capital yielding highest possible returns (Kregel 2007).

Nurkse described a continually increase in productive resources, implemented through domestic development and financed with disguised savings. Due to this, balanced growth would create the market needed for Schumpeter’s entrepreneur to invest into technology and production for domestic sales and thus letting a developing country industrialize and further attract foreign investments. Furthermore, the market might become so large that it

would create opportunities for increased trade through imports. This was his argument against critique of domestic industrialization being import substitution.

2.3 Formalizing the Big Push

The theory of “the big push” lost grounds for some decades, until three economists from Chicago, Murphy, Schleifer and Vishny brought it up into the light again in 1989 with the article *“Industrialization and the Big Push”*. Here they presented the big push as moving a country from one state of equilibrium to another, from non-industrialization to the industrialized one, and under which circumstances would the spillover effects from investments lead to a big push.

Murphy et al. generally agreed with Rosenstein-Rodan’s Big Push, and in a more formal way they confirmed the conjecture posed by him. A small domestic market was a large obstacle for businesses trying to generate enough sales and being able to profit from the use of technology creating increasing returns to scale. They called this the “no-industrialization trap”, and the way out of it was through expanding the market. In specific, the authors emphasized that industrialization in one sector created spill-over effects contributing to increased demand for goods produced in other industries. If investments were done in a coordinated fashion in several industries, taking into account the spillover effects that exist, then markets for several types of production would be enlarged. This is in the same line of argument as Rosenstein-Rodan’s big push theory of “making industrialization profitable”, and in a way that is beneficial for the population as well (Murphy, Schleifer, Vishny 1989).

Murphy et al. have in their article taken a deeper look into different channels that can lead the spillover effects. Different equilibria of industrialization might occur depending on how the spill-over effects from companies are affecting the markets of others and how expectations of other firms influence their own investment decision. This is done through a stylized model, portraying the implications of which channels one assume exists. Possible spillover effects are numerous in the case of several equilibria.

The authors first address the situation, where spillover, positive or negative, can materialize only through profits. Under such circumstances they state that we will have a unique

equilibrium. When a firm with production yields positive returns, then revenues are contributing to enlarging the market for other goods. “[...] it distributes its income to shareholders, who in turn spend it on all goods and thus raise profits in all industrial firms in the economy” (ibid, p1009). Increased spending is the result of increased profits. However, when one firm alone cannot “break even”, it ultimately reduces the aggregate income and profits for all firms as well. Consequently, the spillover from the firm is positive if and only if own production is individually profitable. In a situation, where one firm cannot earn positive profits, several firms together will neither be able to earn profits. Further on, there will be none incentives for large scale industrialization. The Nash equilibrium is that no big push can be initiated. In the situation with spillover effects impacting exclusively through profits, only one equilibrium can possibly exist at a time. There is no outside authority that can control the outcome, given that the output is solely decided by the firm.

In another version of the same model Murphy et al. presented the possibilities of spillover that come into existence, when we loosen up the strict assumption stated in the last example. What happens when we introduce multiple spill-over variables outside of the profit-function that can affect the markets of other firms? This question led to Murphy, Schleifer and Vishny’s second version of the model that illustrates the more dynamic process of how spillover effects working outside the control of the firm possibly lead to an economic push pictured by Rosenstein-Rodan. Even though a firm is unprofitable, there are other features of the production that are affecting the other firms, to different degrees, in a way that makes them more profitable. The economy is made “capable of a big push” and moving to the industrialized equilibrium (ibid, p1013).

The “wage-premium” model illustrates one type of possible spillover in the dynamic version. The positive external effect works through the increase in income of the workers once a firm introduces productions of increasing returns to scale. Assuming that there is a disutility of working in the factory, the firms must pay a wage premium to the workers, such that they are indifferent between work in the agrarian (e.g. cotton production) sector and the factory. This will be a minimum factory wage necessary and will leave the workers with no surplus other than as profit owners (ibid).

Given that prices on goods do not change, the workers earn a higher real income, which they can consume more from and are better off than before. Assuming there is diversity of consumption, consumers will want to use some of the additional income on the goods produced at the factory they work and distribute the remaining on other industrial commodities available. Increased purchasing power thus increases the profit of other firms as well. First we look at one firm isolated; a monopolist that introduces increasing returns to scale production. For the firm to be able to pay the higher wages and be sustainable, it is crucial that the firm generates large enough sales. Initially, due to the small market, the firms do not have enough sales in the short-run. Later on, when higher purchasing power results in increasing demands for several consumer goods, the altered demand function for several industries will give incentives to enter the market. If there is no expectation that such a spillover effect through wages will be present in any sector, then no firm will be willing to do so and we end up with no industrialization or big push (MSV 1989).

Murphy et al. states that firms have incentives to pay the costs of producing at increasing returns to scale in the case where they have expectations of positive profits for the industries as a whole. The key argument is that all firms can take advantage of every one paying a wage premium to its workers. Higher income and increased purchasing power of the consumers gives higher demand and ultimately higher sales. The welfare increase eventually results in positive profits from “expanding together”, even when investing alone is unprofitable, as stated earlier by both Rosenstein-Rodan and Nurkse’s big push theory. Whether profits for all sectors are positive depends on “the quantity of output produced in each sector”, value of output and the costs of wages (ibid, p1012). The costs spent on industrializing and on scale production are fixed. Furthermore, different levels of such costs affect the possible equilibrium in which the economy moves towards. Besides, the wage costs are foreseen by the firm, but not the extra value this induces on the output. The authors assume that when investing into technology for increasing returns to scale production, it must be the case that the gains are larger than the wage premium paid to the workers in order for the profits of the whole industry to be positive. What each firm gains back in increased demand, as new businesses hire new workers for a wage-premium, must be high enough to cover its initial cost. This is a crucial assumption of the big push and the incentives for investments.

Hence, the market can end up either with industrialization and big push through large scale investments of several firms or no firms investing, depending on the expected returns. Aggregate demand is no longer decided only by profits of the firms, but also the extra wages paid out to the workers, such that they increase consumption of all goods produced. This is effects that the firms do not take into account, when they individually take the decision to invest, since it is not captured by the profits of the one firm. Again there is a coordination failure in the market. Knowing that no firm alone can sustain makes no-one expect the economy to industrialize either. If there is no positive expectation of industrialization, then investing in production of increasing scale will not occur, and higher wages will not be paid.

Spillover effects and external economies between firms and sectors can take place through many different channels. They either affect the costs or benefits of establishing production or even enabling the firm to establish its production in the first place. Technology and production specific knowledge can make an impact on both. In addition, training and human capital have a wider affect than just within the activities of the firm. When workers for some reason leave their job and enter another, they will not have forgotten all the skills achieved up until then. Next, Murphy et al. (1989) point at the social geographical aspects of markets developing and creating urban areas, that make people move and seek opportunities, where they can be found.

Coordination of beliefs between domestic firms impacts the values of the parameters in the model. Whether or not we end up in the good equilibrium is decided by them and the degree of successful coordination. Reaching the industrialized equilibrium is considered as the one we wish to reach and coordination can increase the probability of that happening. The challenge introduces a normative role for a social planner, who has an objective of reaching the equilibrium that contributes highest amount of wealth for society. A planner of this sort can take various actions to lead the belief of the other actors in the market in such a way, that they become aware of the possibilities existing, because of numerous spillover effects; the wage-premium effect being one of them. Usually when looking at market failures, we see the government as a natural social planner. So did also the three main contributors to balanced growth and the “big push theory”. The government is in a position to encourage investors in different sectors and can subsidize investments in various sectors,

so as to initiate a larger push of investments in the economy (ibid, p1019). However, the government in developing countries is often struggling with other concerns within the country and cannot cover its own costs. Other actors can possibly act as a social planner who tries to coordinate the beliefs among firms in different sectors. One of them is the European DFIs. Investments into the high-risk markets and channeling financial funding through regional funds to local markets are done with a deeper belief and normative objective. In the next section, I will explore more the phenomenon of DFIs, presenting more in depth the European DFIs and the way in which they operate and the objectives underlining. Afterwards, I discuss the way they can impact as some kind of “social planner” the beliefs in the domestic sectors.

3 Development Finance Institutions

3.1 Defining Development Finance Institutions

Development Finance Institutions (DFIs), with focus on the European DFIs, are capital investment funds. From the total of fifteen funds, five are state-owned while two are privately owned and the rest are both private and government controlled (Dalberg 2010).⁷ They invest in projects within the private sector in developing countries that for different reasons are unable to attract foreign direct investment. Public funding is not in place or not sufficient for growth in the business sector. The financial markets will therefore be underserved of capital. Investments in these countries could be considered as being too risky, and returns on projects are perceived as very uncertain. In general, Development Finance Institutions from around the world works with capital management that is characterized by higher risk, partly because they invest into areas, where other commercial investors are not prioritizing their portfolio. 30 percent of European DFI's portfolio is placed in Asian companies, while 28 percent is invested in African. Of new investments, Africa is the continent that dominates the most (Dalberg 2010).

3.1.1 Development Finance Institutions' Objectives

Development Finance Institutions operate with investments in a different way than a typical commercial investor. Behind these high risk investments in developing countries lie a very broad and normative objective, that comes in addition to being financially sustainable. The very reason for taking on the risk of these projects is the aim of impacting the development progress in these areas and creating long lasting improvements. Poverty reduction is a crucial element for achieving development. This has been illuminated by the establishment of the Millennium Development Goals (MDG), and its target of eliminating half of the people living under extreme poverty within 2015 (UN MDG 2010). Nonetheless, MDG also states that still one billion people will live in poverty in 2015, when the goals are to be reached (Dalberg 2010). The pursuit to lifting developing economies out of poverty will continue long

⁷ These DFIs include the ones from Belgium, UK, Spain, Germany, Finland, Netherland, Denmark, Norway, Austria, France, Switzerland, Italy, Portugal and Sweden.

after the MDG, and they cannot rely on aid or government loans for all time. At some point, these countries must be able to stand on their own.

3.1.2 Barriers to Finance

The developing countries, and especially Least Developed Countries (LDCs), have difficulties in attracting foreign direct investments (FDI) for several reasons. Unstable and divided political regimes, civil war, ethnic tensions and corruption are some.⁸ This is also mirrored in the Standard & Poor's Sovereign's Rating, where governments are rated based on various characteristics. This includes both economic risk, such as government's ability to repay on time their obligations and political risk, defined as its willingness to repay. The latter includes measuring "the stability and legitimacy of political institutions". Furthermore, the economic structure, demographics, wealth, economic growth and budgetary performance constitute critical values, which are included in the rating (S&P 2007). Of the 53 African countries only 15 have received ratings in terms of domestic and foreign credit risk by Standard and Poor's, the results varying between A+ (Malaysia) to B (Ghana, Burkina Faso and Cameroon), with triple A as the best and D as the worst (S&P 2011). The World Bank has also done research within investment and economic processes and developed the "Ease of doing business" ranking, where the top-two African countries are Mauritius and South Africa at 20th and 34th place in 2010. Factors like the costs and time it takes for permits, registering of business, trade across borders, contracting and closing a business determines, where on the scale one ends up relative to other countries (World Bank 2010). Improvements can be made in order to ease the inflow of FDI, as well as increase incentives and motivation of other commercial financial institutions to invest. Nevertheless, such stimulation of investment will not happen over night, and investors must still show patience when doing business in emerging markets. It is crucial that FDI keep spurring into these markets, such that established businesses continue to grow, and new ones get the capital they need.

⁸ For definition of LDCs, see section 1.

3.1.3 The Role of the Private Sector

The European Development Finance Institutions are investing for the sake of development, and the way they intend to achieve this is through private sector investments. Investment into the public sector, in addition to aid, plays a large role when achieving poverty reduction. The effort from such funding enables the supply of education and health, and also building of infrastructure. It is a firm belief of the DFIs, that in addition to this, reduction in poverty requires an active financing in private businesses. The role of the private sector is confirmed by the importance of economic growth for achieving development in several ways, reducing poverty too. Fjose, Grünfeld and Green (2010) from Menon Business Economics show that there is a possible connection between growth rates and the rate between private and public sector investments. Countries with high growth rates, more than 5 percent, have twice as much private sector investments as public, while low growth countries with less than 3 percent growth have about the same amount of private as public investments.

The European Development Finance Institutions use different financial instruments, depending on what type of sectors and business they intend to reach out to. The funds use private equity and venture investments when being an active investor in the firm. When financing indirectly the funds provide loans given through local commercial banks and banks operating with microfinance loans. In this way the DFIs are able to finance all different segments of the business sector, from microfinance to large businesses (Dalberg 2010).

As mentioned earlier, DFIs differ from commercial banks, due to their geographical priorities in developing countries that are rated as high risk. In addition, the funds differ in terms of the time horizon on their investments. While a local commercial bank might engage loans for 3-5 years, a DFI can provide loans up to 10-15 years. Some even up to 25 years depending on the project (te Velde and Warner 2007). The long-run approach creates a less pressured situation for the DFIs, when investing into high risk projects. The businesses do not have the pressure to deliver returns at an early stage of the process and giving them time to develop might enhance their chances of succeeding.

The distance between the headquarters of the national DFIs and the local markets is far and might in some cases pose a constraint on the work of the funds. Hence, DFIs have an active use of smaller local funds that can assist in channeling the funding to local projects. In some

places, where DFIs wish to invest, no such local funds exist. In such incidents, the DFIs hire and educate new fund managers and establish new offices. This is increasing the possibilities of creating jobs and income for larger segments of the population within these countries. Employment is decisive in lifting both individuals and families out of poverty, making them self-sufficient in the long-run. High unemployment rate is a constraint on economic growth independent on the degree of development a country is currently facing.

3.2 Achieving Their Objectives

3.2.1 Investing into Small and Medium Sized Enterprises

There is a special focus among the European development finance institutions on the investments into small- and medium enterprises (SMEs), consisting of 10 to 250 employees (European Commission 2005). They are too large in the number of workers and production to fit the profile for receiving microfinance loans. At the same time, the SMEs are not able to fulfill the requirements for getting financial loans with local commercial banks. They are perceived as too small, costly and risky for the banks. Local and international commercial banks try to minimize the risk of default. Thus, the bank loans are typically more expensive, for a shorter term and harder to obtain. SMEs then become stuck in the middle of these two opportunities – the first, which could have assisted them to start their own company, and the second, which they employed their own staff. This is especially a pronounced problem in Sub-Saharan African countries (Fjose, Grünfeld and Green 2010). Those trying to start their own business might in some cases end up borrowing resources from informal lenders like family, overdraft and money lenders, and paying substantially higher interest rates (Dalberg 2010). In a country like Lesotho, money transferred from family members living in foreign countries stands for 29 percent of GDP (Norfund 2010).

SME's constitute a large part of the companies in developing countries, with up to 90 percent in Kenya. Furthermore, they employ a larger part, 38 percent in this case, of total employment (Fjose, Grünfeld and Green 2010). A trend, pointed out by the same author's, is that SMEs are contributing more to development, as well as value added, once the country in its early stage of growth is starting to experience a certain level of increasing income.

“Small businesses are the growth engines of the world’s economies; yet their success rate is not as good as it could be simply because of a lack of access to good business management practices. Giving small businesses the information and new collaborative technologies they need, will help them grow and prosper.” (Lars Thunell, Executive Vice President and CEO, IFC)

The European Development Finance Institutions invested 32 percent of the 2009 portfolio in the financial service sector, which generate benefits for other sectors through access to finance (Dalberg 2010). This is an important way in reaching the SMEs and providing them the financial support that they need.

A thriving business sector is a source of income for the economy as a whole through an increased tax base. The government is then able to finance fundamental public services like infrastructure, institutional and regulatory framework, education and public healthcare. As the country is able to generate more income, these institutions will help to reduce the dependence on foreign aid (Dalberg 2010).

3.2.2 Initiating Other Investors

Closely related to this issue of investment rankings and investors risk averseness is the work that Development Finance Institutions do to motivate other commercial companies to invest into the underserved private sector of developing countries. As mentioned earlier, little foreign direct investments (FDIs) are invested in such markets relative to the existing demand. When being an active financier in these areas, the DFIs create larger acknowledgement internationally and direct more attention towards developing countries, as an attractive market. The fact that the DFIs succeed in earning returns on their investments is the best publicity they can achieve.⁹ The funds wish to show that it is possible to find good and sustainable projects despite the high credit risk ratings (Dalberg 2010). The DFIs are then able to co-invest with commercial banks, investment funds or private businesses and companies. Such actions initiate an investment that would otherwise not have been made. The reasoning follows from the fact that European funds have a higher risk profile in their portfolio and are able to take a larger share of the risk involved in such an

⁹ As an example; from 1997 and up until 2009 Norfund gained an average return of 11 percent.

investment (Dalberg 2010). In particular, the European funds are able to reduce the amount of risk involved for the other investor.

3.2.3 Transfer of Knowledge and Technology

“Technology has been the main force behind the long term increase in income in the rich world, not exploitation of the poor... The beauty of ideas is that they can be used over and over again, without ever being depleted”. (Jeffrey Sachs, 2005, p31-41)

There is a long way ahead, before developing countries reach the level of industrialization and technology as developed and leading economies take for granted. Still, the path of attaining it will decisively be easier for them, as they can receive during a short period of time the knowledge and know-how that they need. Development finance institutions can bring expertise into projects and in such a way spur development within different types of production. In this way, expertise eventually results in more goods and services being available in the market. Technology that enables purification of water is an example. Better technology also leads to more efficient production in already established industries, which allows for larger production and value from initial land or working force. An example is more efficient electricity production by introducing the use of hydropower from lakes and waterfalls, as in the case with the Bugoye hydro project in Uganda (Norfund 2010).

Development Finance Institutions do have a lot of knowledge, when it comes to managing a business and the administrative aspects of projects. However, this is not always enough to get a business started where production facilities. Furthermore, workers are lacking more than just a schedule. DFIs therefore play an important role in motivating other companies to invest expertise and technology into such markets, in addition to creating better access to finance. Transfer of know-how and on-the-job training of staff benefits the local community, because of higher levels of attained skills. Some funds invest together with commercial companies from all over the world in order to raise money and the knowledge needed to help businesses in developing countries start production. Other DFIs that are tied to a national mandate, that expects their operations to represent national interests. Consequently, they engage only with domestic companies. Comparative advantages both in

the home country and the recipient can be exploited, which might lead to expanding the export sector of unindustrialized countries (Dalberg 2010).

3.2.4 Raising Standards

When investing private equity, the funds act as an active investor directly in the company and are then able to influence the business environment. This implies the establishment of firm guidelines and corporate governance. Improvements and strengthening of the business strategy and way of conduction might make them more attractive as an investment partner for others. With participation from start to finish DFIs are able to raise the health, environment and security levels, and improve working conditions up to decent standards. More specific standards with international acceptance, like the ones carried by the International Labor Organization (ILO) and also guidelines worked out by the International Finance Corporation (IFC) of the World Bank group are commonly used within the DFIS (Norfund 2010).

3.3 Sustainable Investment Strategy

In order for the funds to create longstanding economic growth and help countries out of poverty, DFIs must also aim at sustainability within their projects. More specifically, they need to ensure that their projects remain financially viable and earn positive returns. At some point the DFI decides to withdraw its contribution, and then the project must survive on its own. Either the company itself buys out the amount of the ownership of the fund, or another commercial partner commits to the project and buys the shares of the fund. The money that the finance institutions earn on projects is to be reinvested in their portfolio of engagements (Dalberg 2010). As their financial resources grow, it enables them to invest into more projects simultaneously. In order to continue the work they do, the funds themselves must stay financially viable. As mentioned earlier, it is very important as a signal to other commercial investors that they do so. The DFIs differ between what requirements they have, when it comes to specific return targets on their investments. While some require to at least breaking even, others have over 5 percent target on investments (Dalberg 2010).

The higher the target is the more projects must be excluded from financing. There will always be a tradeoff between expected returns and aims of development.

4 Development through a Big Push and the Role of DFIs

4.1 Development Finance Institutions Thinking in Terms of a Big Push?

Two factors stand out as most common between the Big Push theory and The European DFIs. First, investments are used as a means to accomplish economic development. Second, is the firm belief that a thriving private sector contributes to economic growth and thus development.

The theory of a “big push” development is in short picturing a coordinated large scale investment into many industries, in such a way that a country is pushed into economic growth faster, than it can do by itself. Regarding the investments made by the European DFIs, it is more a question of what their national interests are. One could also regard it as a question about what comparative advantages are there to be exploited, when deciding in which types of businesses they want to invest. Their strategy is closely tied to the mandate they are under, and the resources they are responsible for managing on behalf of their shareholders. The DFIs focus on trying to initiate funding from other domestic companies and channel as much needed expertise as possible, from co-investors to the developing countries. It is therefore not given that from the DFIs in question will be broad based investment of such a scale followed by a big push development. I will first look closer at explanation behind this observation and further on discuss the role that the European DFIs actually can play in terms of this kind of development.

4.1.1 Diversification of Risk

Diversification is a particular important issue for Development Finance Institutions, because these institutions invest into what is perceived by commercial financiers as high risk markets. Individually, the European DFIs have their own personal target for achieving diversification in their portfolio and do it in several dimensions in order to reduce risk. At the same time, a problematic aspect of diversification is that it could be consistent with the objective of

achieving a highest level of development impacts as possible through their investments. As I will discuss later on, the DFIs are in a special position to take on risk, but this does not mean that they do not have to take precautions. Some diversify more in one way than another. I will go through some of them.

Geographical diversification, meaning to an extent investing into developing countries in regions all over the world, is similar for most of the DFIs, although some might concentrate on reaching out to a couple of continents. Norfund, the Norwegian DFI, has in recent years invested a larger part of its portfolio into Sub-Saharan Africa, with 78 percent of new investments in 2009 going to this region (Norfund 2010). Yet, there is still diversification of the investments within the region.

DFIs also take into use different types of instruments, like loans through commercial banks, direct loans, private equity, guarantees and mezzanine loans. These instruments provide capital in a way that suits the individual firm or the target group within a society. This increases their diversification of risk. With direct equity investments follow higher risk than with giving loans. The largest changes can be made through the use of private equity, and some DFIs have such financing as a much larger share of their portfolio than the loaning activity, including Norfund. In Norfund's portfolio of 5 246 million NOK, direct equity, indirect equity and loans make up 53, 32 and 15 percent, respectively (Norfund 2010).

Diversifying investments sector-wise is also desirable for the DFIs. Nevertheless, such diversification could be a challenge for DFIs, because it might not coincide with the investment profile of their co-investors and the expertise, nor the comparative advantages that are present. Norway is a leading actor within hydropower production. Norfund, investing up to 55 percent of their projects with Norwegian companies, has an investment portfolio including 44 percent in renewable energy (Norfund 2010**). This stems, in large part, from Norfund's engagements in SN Power Invest, which stands for half of Norfund's total investments. It specializes in renewable energy projects and Norfund owns 40 percent.

At first glance, there are no obvious reasons for why diversification of financial instruments would not be part of a coordinated large scale investment, seeing that no business is alike, and that these are in need of different types of financing. However, in relation to a "big

push” development of an economy, the DFIs cannot, given their objective pointed out here, go into a market and industrialize several potentially profitable businesses simultaneously. It might be that the projects involved would fit the profile of their portfolio, and Industrialization in the market is in the interest of the home country. Conversely, diversification of risk necessitates of the DFIs to play a less prominent role, than what Rosenstein-Rodan pictured in 1943 for the coordination of industrialization of the East and South-East Europe. In the end it is all tied up to the mandate and the individual objective of each DFI.

4.2 European Development Finance Institutions Working towards a Big Push

I would like to claim that Development Finance Institutions can contribute in many different ways to increase the chances of achieving a big push within an economy, pushing it out of the vicious circle stated by Nurkse. Unlike commercial financial institutions, the DFIs have several properties that make them able to influence and assist the economic development, which takes place through the building of a private business sector. The European DFIs do not stultify, but can possibly enhance and strengthen several of the conditions moving forward the big push mentioned earlier. I will discuss several of them in the following section. However, the contribution from the funds alone cannot make sure that a process like this will happen, due to the small size of the DFIs and their need to diversify their portfolio, as I explained briefly in the previous section.

In such a discussion, we must not forget the role of Official Development Assistance (ODA) and aid, which has been a means for development for a long time.

“Official development assistance (ODA) plays an essential role as a complement to other sources of financing for development, especially in those countries with the least capacity to attract private direct investment [...] In that context, we urge developed countries that have not done so to make concrete efforts towards the target of 0.7 per cent of gross national product (GNP) as ODA to developing countries” (UN 2003, Monterrey Consensus paragraph 39-42)

Furthermore, large Multilateral Development Banks, the World Bank and four regional banks have contributed with capital to developing countries in a large scale, but mostly going to

the public sector. Multilateral Financial Institutions like the European Investment Bank are a bit smaller and focuses on special sector activities. Last, but not least, we have Sub-Regional Banks, which are also multilateral, that provide long-term loans (World Bank 2003).

4.2.1 Achieving Social Overhead Capital

Social overhead capital, as Rosenstein-Rodan argued, is one of the first issues that must be addressed when discussing development. It comprises what he calls “basic industries”, such as power, transport or communication. Besides, social overhead capital is not an input factor that can easily be imported. Large initial investments are needed, and at the same time “excess capacity will be unavoidable over the initial period in underdeveloped countries” (Rosenstein-Rodan 1966, p61). The greatest pecuniary externalities are achieved through these types of investments, because of the large scale opportunities that arise from the use of infrastructure, communication and power.

For example, it is not hard to argue that infrastructure plays a crucial role for the mobility of population, goods, communication and ultimately economic development.

“The shortage of infrastructure in developing countries is an important obstacle to meeting populations’ needs, to enterprise development and to achieving the goals of the Millennium Declaration.” (OECD 2007)

The private value lies in the reduced cost of transportation, whether they are inputs reaching the production site or goods reaching the sales market. The social value is the general development from increased mobility of goods, people and services. But there are large issues regarding lack of incentives for financing this type of project. Murphy, Schleifer and Vishny (1989) point out two reasons why.

Imperfect Information

First of all, it is hard to measure the marginal value of a common good, for example a road, to each user. Whoever builds a road will want to extract as much as possible of the gains achieved by them. Still, without perfect information of their willingness to pay, it is very difficult to price discriminate between the consumers who all have different value of the road.

Second of all, after providing the common good, there will still be uncertainty whether coordination failure among firms can prevent industrialization of the economy. It is far from certain that the country will move towards the industrialized equilibrium Murphy et al. regard as the good equilibrium. In order for them to be profitable, they rely on other firms in other industries to do the same, as the theory accent. Hence, there will be uncertain profits involved for the building of roads and other infrastructure. For example, if two firms are profitable, only if both invest in production, then they will have to agree on a simultaneous start-up in order for there to be industrialization. The company investing in the road does therefore not know, whether it will ever be able to cover the costs of its investment in the future.

It can seem like a two-way issue. The building of infrastructure can increase the attractiveness for companies to settle in an area, caused by the change in the cost function. Moreover, the number of companies affects the demand function to producers of infrastructure and thus determines the willingness to invest into such input factors. When there is no possibility of price discrimination, the producer must charge a price such that the least profitable firm is able to pay, because the market depends on all firms existing. If the producer is not able to cover the expenses at this price, the project under consideration will not be realized. Capital injections from Development Finance Institutions can possibly affect the incentives going both ways.

The Role of a Large Buyer

I refer to the first issue, the inability to price discriminate and the potential outcome of no social overhead capital provided at all. One possible solution to the problem is for there to be a large business from one sector, initiating what is a relatively large investment in the first stage of developing. This actor will have to be of a size, which makes the producer of social overhead capital willing to provide what is necessary for the business to run its production. The amount of the common good demanded by an actor of this magnitude will have to exceed a minimum amount required by the producer. One thing is large demand, but the producer can in addition charge a very high price for the use of its good. The possibility for the producers to set high prices is caused by the supply being smaller than if more firms were demanding as well. The underlying assumption is that providing just the amount of the

good demanded by the first firm will press up the price in the short-run. For the firm to succeed it must be economically viable as to cover the costs this brings with it. Under these assumptions, the first business entering the market, being a large demander for social overhead capital, will be capable to induce the investment from the producer of an important common input factor.

DFIs can in cooperation with a commercial firm from its home country, take the initiative and act as a large business, together with a domestic investor within that sector. The project is based on possible economic returns and development impacts, in accordance with their objective. On the basis of this they invest with a less risk adverse attitude and are willingly including risky projects into their portfolio. The DFIs are thus able to act as a first mover. Another important reason, why these funds stand out as a possible large investor, is because they invest with a long-term horizon. It is then conceivable for DFIs to trade off the short-term loss from high price now with the long-term gains of industrialization and increasing sales.

Later on, more firms enter the market, caused by increased demand and other factors altered by the initial firm, which I will discuss afterwards. Consequently, the demand for social overhead capital rise. The producer was in beforehand sustainable in its production and will increase its income, when further more firms are charged for their use of the common good. However, businesses that enter after the large investor are less profitable or sustainable and more risk averse. These firms are not able to pay the price charged by the producer to the first firm in the beginning. The producer will have to reduce the price, as the number of firms charged increase with time, and the price will be reduced for the large investor as well. The most profitable firms will likely be the ones entering first. As the price is reduced with increasing demand, smaller and less economic viable firms are able to enter. This process will lead the economy to the industrialized equilibrium and push it out of the development trap caused by coordination failure.

Signaling

The second issue that was pointed out by Murphy et al. addressed the coordination failure among the potential benefiter of social overhead capital. The solution presented before is

only half of what must be solved in order for the economy to reach a good equilibrium. Even if social overhead capital is present, it might still not be enough for the firms to invest in production, since nothing happens with the size of the market, as long as no new firm enters. Getting firms to invest simultaneously is crucial for the success of the large firm first entering. DFIs and co-investors, that they initiate investments from, show interest and willpower to start this one large project in the local market, confer previous subsection. The co-investor has capital and expertise to start it, and the fund contributes with capital that covers the most risky part of the project, apart from the amount covered by domestic investors. The actions of both the foreign investors create a signaling effect towards other potential domestic financiers that they perceive the project in question as of profitable value. According to them there are returns to earn in the market, which have not yet been exploited. If other firms consider it to be credible, then it might enhance their motivation and make them reconsider their options. Credibility plays an important role in a situation, where the DFIs have private information about the profitability of their project. A way to signal the value of the investment can be to take up a large part of the costs connected to it. Leland and Pyle (1977) argued, that when there is informational asymmetry, “this willingness to invest may serve as a signal to the lending market of the true quality of the project” (ibid, p372). When DFIs invest with private equity into SMEs, they take a large share of the risk and the costs included in the firm, thereby signaling to others their perception of the project. Norfund can at most take a position of fifty percent of the shares in a company, and within the SME part of their portfolio the ownerships vary from 15 to 45 percent (Norfund 2010). A successful initial investments made by the DFI can alter the demand function for the firms, such that they become encouraged to invest as well.

Both effects are influenced by the investment of a DFI and reinforce each other and can move the economy towards big push. DFIs play the role of a coordinator through its investments, like some sort of social planner. What is more, they provide the agents in the market the incentives they need to take the required steps, creating a thriving market and economic growth.

4.2.2 Reducing Financial Risk

The portfolio of each the European DFIs is composed of capital injections from both public and private shareholders. This includes capital from loans to accumulated profits. Public sector funding to DFIs go through Official Development Funds (ODA), Other Official Funding (OOF) and other government funds that play an additional role. Among the ODAs in the European countries, the highest registered transfer to a DFI is only 3 percent in Switzerland. Development funds play a minor role relative to traditional government aid. Still, it amounts to an important part of their capital. Between 2001 and 2009 the capital injections made by governments into the whole European DFI portfolio was “7 percent of the total portfolio value as of 2009” (Dalberg 2010, p20). Most of them are not exclusively depending on their own returns for financing new investments. As part of the national ODA, ten of the European DFIs are receiving yearly funding from the government (ibid 2010).

It is important not to take lightly the fact that DFIs are able and willing to take a larger amount of risk in their portfolio of investments. They are thus in a special position to act less risk averse towards uncertain projects. The European DFIs are able to be sustainable in another way as other commercial investors. The shareholders of their portfolio, both public and private, have granted them the capital with, which they invest in order for them to take larger risks. Norfund has since the beginning in 1997 received increased funding from the owner, the Norwegian government. The first transfer was 175 million NOK in 1998. For 2009 the transfer was 585 million NOK, including an increase of 100 million from 2008's transfer of 485 million NOK (Norfund, 2009). These transfers enable the DFIs to stay in the project on a long-run basis and not having to demand large returns in the short-run. The long-term perspective is especially important in an early stage of market development, since it enhances the chances for the firm to succeed.

Capital flows into private businesses from Development Finance Institutions are induced on the basis of strict evaluations and due diligence. For example, Norfund uses “international Private Equity and Venture Capital Valuation Guidelines” in their yearly evaluation of their projects, which has to be very strict to ensure high security on returns (Norfund 2010). Even though they have a more stable flow of cash in their portfolio than other commercial banks,

they still need to take their precautions for reducing risk. Measures to prevent high risk levels can also affect their credibility among other potential investors.

The DFIs can, as I mentioned earlier, work as a leader or a first mover in collaboration with local investors, who in an indirect way tries to make the other domestic and possibly foreign investors follow their move. As Ray (1998) argues, in cases where there is no loss connected to moving first, innovators who like to think different from others will use the opportunity to enter first with its innovation in hopes of a possible gain. In the case where “going first” implies taking economic losses, only over optimism or arrogance can make any investor willing to do so. If it is the case that there are possible advantages to moving first that outweigh the costs, then expectations can influence the investors and we can have a situation with multiple equilibria. If many enough have optimistic beliefs about successful production and sales, then this optimism might lead to the industrialized equilibrium as Murphy et al. pictured it. Whether or not the European DFIs can enter first into the market depends on their own risk profile and that of the co-investor. Either way, commercial finance institutions are less likely to take the challenge of entering the market first.

In some cases, the project is of such a high risk that it is difficult to argue in favor of the investment, despite the large development effects that can be achieved. This has in some cases been solved by creating an entirely government funded capital fund. This kind of funds is exclusively made for the projects in question and is kept outside of the initial balance sheet of the DFIs. An example is the collaboration between Netherlands Development Finance Company (FMO)¹⁰ and the Dutch government to start the SME fund “MASSIF Fund”. The clients are financial institutions, for instance commercial banks, which want to expand their client-base to microfinance institutions and NGOs. FMO enables the banks to give long-term loans in local currency (Dahlberg 2010).

Many local entrepreneurs, wanting to start their own SME business, often lack the collateral and are not able to obtain long-term financing for their project. There is higher risk connected to start-up firms that enter the market for the first time with a new innovation, and so the domestic capital markets are very risk averse towards such customers. In 2009,

¹⁰ The abbreviation, “FMO”, stems from the Dutch name of Netherlands’ DFI, namely “Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V.”.

out of all the investment projects made by Norfund, 30 percent were start-up firms where the Norwegian DFI took part as an active owner from the initial development phases of production. One of the larger projects that Norfund initiated in 2009 was a venture-capital fund, FANISI, which only invests in start-up firms and companies that are in an early phase of production. The fund has committed itself to invest 40 million dollars. By such commitment they hope to encourage other financial institutions and local banks to take more risk. Furthermore, this act of Norfund aimed to stimulate investments into businesses that have up until now barely been a part of their portfolio (Norfund 2010).

Challenges to Risk

When acting as a first mover, the DFIs are, as already stated, taking on a large amount of risk. There is uncertainty whether they succeed or not; success depending on the actions of other firms and the size of the market. It might be the case that no other investor is willing to make any move into the market, until the project of the DFI can show positive returns. Assuming an initial low rate of return, or no certain one, an investor will wait until the rate of return rises, such that it is above what he currently is earning by staying, where he is now, whether it is another market or industry. Before anyone makes a first move, the short-run rate of return will be too low, or else there would already be someone investing. If every investor acts in this way, then expectations do not play a role anymore, and we get a unique equilibrium, depending on the conditions as they are exogenously decided ex ante. As Ray strikingly put it; "...everybody wants everybody else to go first" (Ray 1998, p146). If everyone chooses to sit on the fence, waiting for success to arrive, then the effort of the DFIs will be in vain in the long-run. They will, independently of the amount of risk they are able to take on, not be willing to invest given that the success of the business depends on others doing the same. Investing into a project and seeing it falling apart after the DFI withdraw their investments is something they under any circumstances want to avoid. Such a failure could be devastating for the people and the society involved (Norfund 2010).

4.2.3 External Economies

As I have elaborated earlier, in connection to the process of inducing a big push development, external economies play an important role in the process of achieving it. It is a

hidden source of incentives for investments, because the effects are not directly observable to the individual firm, and the profits from it are received in an indirect way.¹¹ When we assume spillover effects outside of the profit-function, the success of one business can create pecuniary effects. These can be large enough, so that other industries and businesses become interested in establishing production through increased potential profitability. Flaming (1955) characterized this as horizontal external economies. The success of the firm, leading to pecuniary externalities to other firms, will in return result to higher sales of the good produced by the one firm in question, given the complex consumption pattern of consumers.

In addition, there is the case that industrialization within an industry leads to increasing demand for several inputs not initially available or not in the scale needed. Hence, there is a chance for producers of intermediate input factors to exploit the vertical external economies that arise from new businesses entering the market (Flaming 1955). A transition, like the one under consideration, is time-consuming. Typically, newly started businesses initially import special input factors that they need in the beginning of production. Afterwards, when production is more regular, they switch to other more common inputs that are possibly produced local. If they are situated in geographical remote places, then it is natural to import from neighboring countries, since the domestic market is too far away (Norfund 2010). The chain of production opens up new types of firms. Later on, the expansion of the supplier industry might leave other potential industries better supplied as well, creating new external economies the other way around (Flaming 1955).

External economies play a central role for the Development Finance Institutions, because of their target of achieving development through their investments. They choose their projects based on their own personal criteria within sustainability and development impacts, with emphasis on the first. DFIs must achieve the sustainability first in order to see development impacts. The spillover effects taken into account, the development impacts are possibly larger, than what the DFIs are able to measure.

¹¹ Through larger sales market, better knowledge and technology with time. I mention them in following sections.

Technology Spillover and Cost-Efficiency

I mentioned earlier that DFIs enter into a project with financial support and through their co-investor introduce the needed expertise and knowledge for implementation. Next follows the introduction of new technology and production methods that create economies of scale. Production becomes more profitable due to increased efficiency and reduced long-term costs, although with high fixed costs in the beginning. In the *Journal of Development Economic*, Liu (2004) discusses how FDI generate technological externalities and its effect on firms' productivity. New technology can be transferred to other sectors of production through observation or the establishing of new business relations. Furthermore, the turnovers of labor, from firms consisting of FDI to firms, who have not received such resources, play an important role in intra-industrial transfer of technology. In his analysis of Chinese manufacturing firms, he found that the effects on production level and rate have different signs and "can go in opposite direction" (ibid, p176). The level of productivity of average firms is reduced by an increase in FDI in the industry, and the rate of productivity growth for average firms rises in response to higher FDI. This underlines the fact that technological transfer is a costly learning process and takes time and effort. The total long-term effect is that the positive effect on the rate of productivity will be able to weight up for the loss initially incurred by the increase in FDI and "thereafter the net effect of spillovers is positive and growing over time" (ibid, p186). In the long-run the domestic firms benefit from the presence of FDI.

New methods of production can become further developed to fit the production by new businesses. Ultimately this development can lead to a wider range of sectors and a market characterized by a larger amount of different consumer goods, many that have not been available before.

The increasing returns to scale in production materialize on its own, given the use of more advanced technology. For every unit produced, the marginal cost goes down and increasing returns to scale do not depend on other factors outside of the production. External economies work in a complementary way in addition to scale economies, increasing the

demand of the initial firm and increasing the profitability of the firm, who makes other firms invest.

When industrializing, some industries use intermediate inputs that are very sophisticated and costly to produce. It is in some cases only under increasing returns to scale that such inputs are worth producing. Initially, the demand for such inputs is low and the price on the input is too high. If the firm is not profitable enough, then not only will it be hard to cover the high fixed costs of investing into increasing scale technology, but it will neither be able to initiate production of advanced inputs required for production. Moreover, this course of events can turn into a vicious circle, where the regular pattern hard to avoid, and where the result depends on the success of the firm. Besides, the possibility of multiple equilibria is affected by variables such as this. If spillover effects are strong enough, and the firms believe that the market will expand and increase the profitability, then they will establish production of increasing scale and enable production of the inputs needed. This will lead to a virtuous circle motion and eventually result in the industrialized equilibrium (Ray 1998).

Skill-Building and Knowledge

Another aspect of spillover and productivity is whether there is any constraint on the ability to learn and take into use the technology, called absorptive capacity. Yuko (2001) argues that the important factors for further development and productivity are the learning effect of Research and Development (R&D) and technology spillovers and not the innovative effect of it. Rosenstein-Rodan mentioned the reluctance that firms have towards building training facilities in fear of losing skilled workers to other firms. Another reason why countries might lack facilities for educating workers is the workers' shortage of insight in terms of the value of such knowledge. "A worker will invest in such education only if a broad range of different industries offer employment, so that he can take advantage of his skills" (Murphy, Shleifer, Vishny 1989, p1023). Ray (1998) postulates in a similar discussion, that if an industry is depending on reliable supply of skilled labor, but it is not to be found, then this increases the costs of entering the market. In addition, it might be in the interest of workers to acquire such skills, first when they see the firm entering. The rate of return on such skill- and knowledge building is too low to induce the incentives to acquire them. The market for skilled labor is not coordinating in a way, such that demand and supply are able to meet.

The European DFIs act both as a provider and consumer of skilled labor. They provide not only financing, but emphasize the value of managerial skills and corporate governance of the management as well. Further on, the European DFIs actively focus on on-the-job training of the local workers they hire that “is a strong and sustainable value-added benefit to local communities” (Dalberg 2010). Norfund channel the direct private equity going into SMEs through local management funds. The staff are locally hired and educated within management and corporate governance in order to have the competence to facilitate the firms, they choose to invest into. On-the-job training helps them climb the job-ladder and better provide for their families (Dalberg 2010).

Employment

Poverty is devastating for people in many ways and with it comes low prosperity. The Dalberg (2010) report mentions that in a World Bank report, over 70 percent of the poor people in the world believe that the best way to get out of poverty is to attain a job. Furthermore, as Rosenstein-Rodan and Nurkse pointed out, the work in agricultural sector is not providing enough work for everyone. Both also underpin that sectors characterized with diminishing returns are not creating the wealth needed for higher economic growth.

“In virtually all the countries, the State is the largest provider of decent employment. This is partly a legacy from colonial times and the general education systems that continue to flood the labour market with people with qualifications that do not always match the needs of employers. The agriculture sector leads in terms of the number of jobs that it offers. Only, a considerable number of these are vulnerable and do not allow workers to live decently [...] Empirical evidence suggests that strong growth is not in itself enough to create jobs. To do that, growth must be both strong and of top quality and should depend not only on supply-side factors but also on those relating to demand and purchasing power (household consumption, enterprise investments, administrations’ expenditures, exports)” (UN 2010).

The factors that affect growth from the demand side, like the ones emphasized by Nurkse, are the ones the European DFIs direct their contribution towards. The increase in companies and the broader set of industries establishing through the large scale investment leads to more required labor, resulting in reduced unemployment and more working opportunities for the labor force. More people employed imply more people earning money for a living

and thereby achieving stronger purchasing power. Increased income earnings of their workers will induce higher demand for other consumer goods as well. Higher demand for consumer goods will in turn create stronger incentives for other types of industries to stimulate production. As illustrated by Murphy, Vishny and Schleifer, the wage-premium model exemplifies how such spillover can take place. By the end of 2009, there were 148 000 workers employed in companies included in the portfolio of Norfund.

However, industries with increasing returns to scale in their production are capital intensive industries. Even though new firms generate new job opportunities, the number of jobs is lower than in many other types of production; but then again, the wages in such industries are lower as well. In a UN (2010) report on West African countries, where several countries have experienced GDP growth between 2 and 7 percent the last ten years, data has shown that economic growth has not generated employment as hoped. Their analysis shows that the growth in productivity has been higher than the employment growth. "If productivity growth outpaces economic growth the volume of work on supply may stagnate or diminish" (UN 2010). Therefore, although the linkage between growth and employment is strong, it is just as complex since economic growth can stem from different kinds of sources.

Pigovian Divergence

The administrative director of Norfund, Kjell Roland, stated in the 2009 "Report on operations":

"[...] the prospects for economic growth in many poor countries in and outside Africa are far more favorable than most people realize, and that our portfolio and those of others have proved over a period of many years that it is possible to invest profitably in these regions".

An overarching issue that is influencing all parts of this thesis, related to the concern of coordination failure, is the presence of Pigovian divergence. Investors do not see the possibilities created by external economies. What is more, even if they were aware of them, the social marginal value of these positive externalities is not included into the evaluation done by companies. The problem was first pointed out by Rosenstein-Rodan and could be discussed in terms of Nurkse's discussion on investment incentives. The level of investments is too low from a social point of view. Besides, Pigovian divergence results in lack of

investments. Governments can and do influence such activity, as in the case of inducing a Pigovian tax on the production, when there is a negative externality (Varian 1992). Under these circumstances, they can contribute with a subsidy that, in an optimal situation, is equal to the marginal value of the external economies that are created by the production. The corresponding solution, however, requires that the government knows the value of the externality, which is not likely to be the case.

The DFIs operate in a different way, not directly encouraging the firms to invest. In an indirect way, the funds are altering the obstacles hindering investments; not only in one sector, but in several ones simultaneously due to the diversity of demand. In the long-run, the Pigovian divergence is reduced and indivisibility is overcome, leading to spillover effects that possibly push the economy out of a vicious trap.

5 The Role of The European DFIs and the Financial Crisis

5.1 Economic Outlook

The last decade, Africa has situated some of the fastest growing economies in the world. “From 2002, and up until the impact of the financial crisis in 2009, sub-Saharan Africa experienced the highest GDP growth the region has seen for over thirty years” (Norfund 2010). Ethiopia, Mozambique, Rwanda, Tanzania and Uganda are the leading ones, and none are oil-producing countries, like Angola and Nigeria. The positive development was accompanied by an increase in Foreign Direct Investments (FDI).

The financial crisis, that hit the financial markets in 2008, has claimed its victims the last years, with large financial institutions falling apart. For many developing and emerging countries the situation has been better than in the Western World. These countries have not been significantly intertwined with the financial markets in leading economies, due to their small financial sector. Therefore, they have not experienced the extent of fall in output as developed countries. Furthermore, these developing and emerging countries are expected to achieve stable growth in a larger scale the nearest years to come, compared to what developed countries are projected to have.

Table 1: IMF Projections on Output

<i>IMF World Economic Outlook</i>	<i>Projections (percentage change)</i>			
	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>
<i>Percentage change in output</i>				
World Output	-0,6	5,0	4,4	4,5
Advanced Economies	-3,4	3,0	2,5	2,5
United States	-2,6	2,8	3,0	2,7
Euro Area	-4,1	1,8	1,5	1,7
Sub-Saharan Africa	2,8	5,0	5,5	5,8
South Africa	-1,7	2,8	3,4	3,8

Source: International Monetary Fund

Table 1 shows an overlook of some of the economic projections presented in the World Economic Outlook, published October 2010.

The situation in Sub-Saharan Africa, where many LDCs and some emerging economies are situated, is also pictured by the IMFs World Economic Outlook in October 2010.

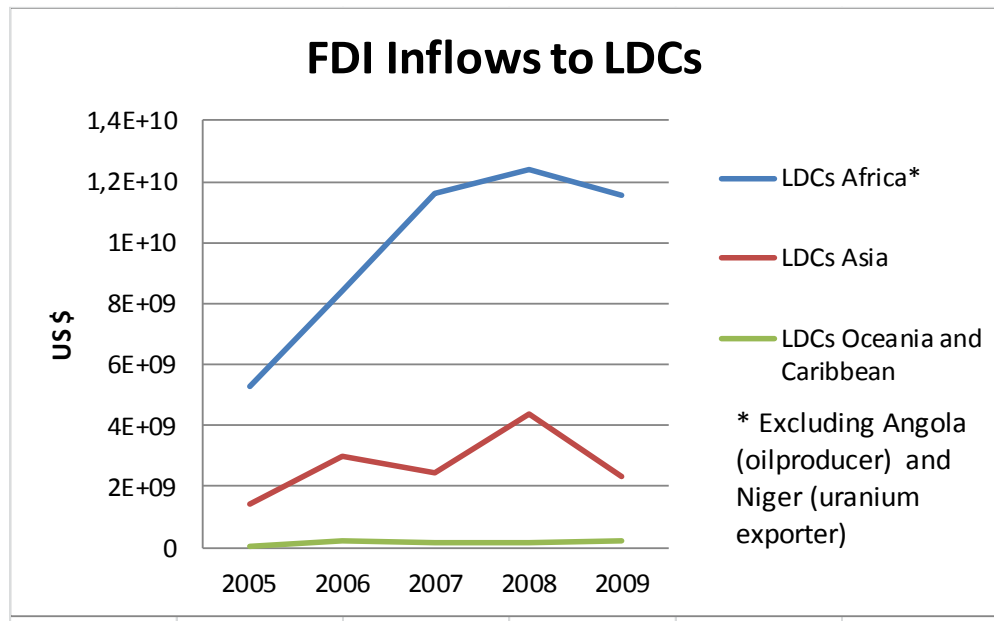
“Most countries in Sub-Saharan Africa have recovered quickly from the global financial crisis, with the region projected to grow 5½ percent in 2011. But the pace of the recovery has varied within the region. Output growth in most oil exporters and low-income countries (LICs) is now close to pre-crisis highs. The recovery in South Africa and its neighbors, however, has been more subdued, reflecting the more severe impact of the collapse in world trade and elevated unemployment levels that are proving difficult to reduce”.

The macroeconomic politics has been improved in several of these countries. They were therefore able to induce a countercyclical economic policy when the effects of the financial crisis hit Africa in 2009 (Norfund 2010). Some of these countries are exporters of raw material, which has faced both high prices and high demand from China, India and Brazil. This has helped the countries remain economically stable during the credit crisis. The Chinese economy was not as hard struck by the financial crisis as other financial markets. Besides, the East-Asian country has during the recession held a much higher rate on foreign direct investments.

5.2 Foreign Direct Investments on the Retreat

Despite these uplifting facts, there is indeed a very important way in which the developing countries have been hit by the financial crisis. Through the fall in foreign direct investment, the poorer parts of the world economy have been tapped for financial resources. After six years of continuing growth of foreign direct investments directed towards developing countries, with its peak level in 2008, there was a turning point in 2009 that led to a stark reduction of such funding (Norfund 2010). This sequence of events is illustrated in graph 1.

Graph 1: Foreign Direct Investment inflows to Least Developed Countries



Source: Data taken from the World Bank Group¹². Graph made by Marianne Fiedler Rørvik.

The graph shows the peak of FDIs in 2008 and the reduction that came in the aftermath of the financial crisis. I have excluded two countries, Angola and Niger, because of their large role as exporters of raw materials.

In a World Bank note called “crisis response”, Heinz P. Rudolph (2010) states that the financial crisis has led international banks to reduce “their cross-border exposure and retreating to core markets”. This has resulted in the use of “State Financial Institutions”, which include state-owned commercial banks, state development banks and “Development Finance Institutions”. Because of their attitude towards risk and the fact that they are less “volatile risk averse”, it is possible for them to act counter-cyclical towards the behavior of the banks. These types of financial institutions can play the role as a buffer, if a credit crunch occurs. At the same time, they must expect to have lower return targets than commercial banks that in general maximize profits (Rudolph 2010).

Return targets are not the main issue for DFIs, as long as the business they invest into is able to be sustainable in the aftermath of their withdrawal. The lack of FDIs calls for an even stronger presence of DFIs, as well as other financial institutions, willingly to, to some extent, hold risky portfolios. The financial crisis brings with it new challenges that stagnate the development in developing countries. In LDCs, unemployment remained constant over the

¹² See Appendix for detailed numbers.

decade. Nonetheless, the global economic crisis had a toll especially on young workers and women workers, putting at risk hard-earned progress in human development and women's empowerment. The primary labor market challenge in the LDCs is not unemployment, but productive employment and decent work for the large numbers of the working poor. "This is the main obstacle to the efforts to achieve the Millennium Development Goals and set the LDCs on a sustainable development route." (ILO 2011)

DFIs will in the future have to keep on creating awareness among the leading financial markets the possibilities that are present in such markets. Publicity for the financial gains they achieve in developing markets is very important in order to create credibility to other potential investors. In February 2009 Norfund proposed to the Ministry of Finance the establishment of a new fund of 10 million NOK for investments in developing countries. The funds were to be taken from The Government Pension Fund Global, which earlier has not been present in this kind of market. The Norwegian Committee of Foreign Affairs and Committee of Finance have agreed on the proposal, and are currently deciding how this will be implemented.

6 Conclusion

The Big Push theory is in many ways relevant for the debate that is ongoing today on the industrialization of developing countries. For the same reasons, there is still a crucial need for financial investors and FDIs today, as when the DFIs first began their activities.

The DFIs can in several ways contribute to increasing the chance of there being a “Big Push” development in the economy; a push that leads the country out of a trapped situation, where no industrialization is taking place. The DFIs, however, cannot by itself stand responsible for such a large scale investment as advocated by the founding father of the theory, Rosenstein Rodan. This is due to the fact that they must diversify risk on behalf of their portfolio and the companies that they co-invest with. Nonetheless, the main contributors to the Big Push theory emphasized on the obstacles preventing the economy from moving towards the industrialized equilibrium, and these are the one that the DFIs can possibly influence.

The first issue that I discussed is the inability to industrialize because of coordination failure between firms and producers of social overhead capital. Social overhead capital is important for enabling the market to function and at the same time the producers are met by unsecure demand in the future. DFIs can influence both parties by acting as a relatively large company that enters the market first. More specifically, they can demand a minimum amount of social overhead capital for a high price, such that production of social overhead capital is sustainable for the producer.

Furthermore, the fund can be a credible first mover into the market. Through its investments and willingness to take risk, the DFI signals how it perceives the expected returns in the market in general. This can alter expectations among other potential investors and. Moreover, the higher purchasing power of the workers at the larger firm will alter the demand for several consumer goods. The presence of social overhead capital has in addition altered the costs for other firms, increasing their profitability. Taking these considerations into account, the DFIs impact through their investments the economy’s ability to move towards an industrialized equilibrium through a push investment.

Still, within such a process, many other external factors are influencing the outcome. Different types of spillover, both horizontal and vertical, are enhancing the speed and volume, at which it takes place. The investments made by DFIs involve initiating financing and expertise from a commercial co-investor. Technology and knowledge spillovers impact far beyond just the production taking place within the firm. DFIs are able to transfer new production methods and innovations to an economy characterized by primitive and low-efficient production. Liu (2004) points out that FDI have different impacts in the short-and long-run, and that the long-run costs incurred in the beginning stages are outweighed by the long-term benefits. The vertical effect is more uncertain, since sophisticated inputs take time to establish and depend on the scale of production.

Transfer of knowledge and skills is of great value for firms and workers. Yet, as Yoku (2001) argues, the absorptive capacity can play a role for the actual transfer-value of such spillover. The initial level of skills is assumed very low, and it will take patience and effort into training and developing the needed working force. With basis in their objectives, DFIs focus actively on on-the-job training and building up managerial skills within the company. Due to the combination of their objective and high willingness to take risk, they must be a very patient investor, staying in the project in the long-run, and be a very active shareholder. This is not something one expects from a commercial bank or investor, who expects high returns on a shorter time frame.

With new firms come new working opportunities. However, trading primitive methods with new technology that is capital intensive will reduce the amount of work available. Nevertheless, in a situation where firms due to market and jobs are very unsecure are barely sustainable, the investment of DFIs over time will have a positive effect on the job market.

Ultimately, the DFIs are creating a coordination mechanism through their investment into high-risk markets, such that the agents in the economy exploit the benefits from each other. Unlike government support, DFIs not only provide financial security, but emphasize in addition on human rights and focus greatly on the environmental conditions of the workers and raise the standards within production facilities. Moreover, the funds influence firms indirectly, affecting the expectations of firms. This role of coordinator is possible, because of

the DFIs stance towards risk and willingness to invest where development impacts are largest.

References

CDC (2009). “Development Review 2009”. Available at

http://www.cdcgroup.com/uploads/development_review_2009.pdf

Dahui, Karim and Dambudzo Muzenda (2010) “OECD Investment News”, November 2010 issue 14. <http://www.oecd.org/dataoecd/13/60/46419425.pdf> (Visited 09.04.2011)

Dalberg (2010) “The Growing Role of the Development Finance Institutions in International Development Policy”, © Copenhagen

European Development Finance Institution (EDFI): <http://www.edfi.be/about/edfi.html>. (accessed 15.03.2011)

European Commission (2005), Definition of micro, small and medium enterprises, http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm (accessed 20.03.2011)

Fjose, Sveinung, Leo A. Grünfeld and Chris Green, (2010) “SMEs and Growth in Sub-Saharan Africa; Identifying SME roles and obstacles to SME growth”. Menon-publication no. 14/2010.

Fleming, Marcus (1955) “External Economies and the Doctrine of Balanced Growth”, The Economic Journal, Vol. 65, No. 258 (Jun., 1955), pp. 241-256 Blackwell Publishing for the Royal Economic Society

Ghatak, Subrata (2003) “Introduction to Development Economics”, 4th Edition, Routledge, Taylor and Francis Group

IFC, Lars Thunell, http://www.ifc.org/ifcext/sme.nsf/Content/SME_Toolkit. (accessed 20.03.2010)

ILO (2011) “Growth, Employment and Decent Work in the Least Developed Countries”, Report of the International Labor Office for the Fourth Conference on the Least Developed Countries Istanbul - 9-13 May 2011, Geneva.

IMF (2010) “World Economic Outlook 2010”.

<http://www.imf.org/external/pubs/ft/weo/2011/update/01/index.htm> (accessed 27.03.2011)

Kregel, Jan, (2007) “Nurkse and the Role of Finance in Development Economics”, Estonian Academy of Science, Tallinn, Estonia. Written for the conference “Ragnar Nurkse (1907-2007): Classical Development Economics and its Relevance for Today”.

Leland, Hayne E. and David H. Pyle (1977) “Informational Asymmetries, Financial Structure, and Financial Intermediation”. The Journal of Finance, Vol 32, No2. May 1977

Liu, Zhiqiang (2004) “Foreign direct investment and technology spillovers: Theory and evidence”, Journal of Development Economics 85 (2008) p. 176-193

Murphy, Kevin M., Andrei Schleifer and Robert W. Vischny (1989) “Industrialization and the Big Push” The Journal of Political Economy, Vol. 97, No. 5 (Oct.1989), pp.1003-1026. The University of Chicago Press

Norfund (2011). Meeting with Heidi Berg, Communications advisor in Norfund, 07.02.2011.

Norfund (2010), “Report on operations 2009”. Available at http://norfund.no/index.php?option=com_content&view=category&layout=blog&id=100&Itemid=279&lang=en

Norfund (2010*) “Annual Report 2009” Available at http://www.norfund.no/index.php?option=com_content&view=category&layout=blog&id=101&Itemid=280&lang=no

Norfund (2010**) “Norfund’s Portfolio in Numbers and Figures 2009” Available at http://www.norfund.no/index.php?option=com_content&view=category&layout=blog&id=123&Itemid=281&lang=no

Nurkse, Ragnar. (1953), “Problems of Capital Formation in Underdeveloped Countries”, New York: Oxford University Press.

OECD (2010) “OECD Investment News, November 2010, issue 14”. Available at <http://www.oecd.org/dataoecd/13/60/46419425.pdf> (accessed 03.04.2011)

OECD (2007) “OECD Principles for Private Sector Participation in Infrastructure”
<http://www.oecd.org/dataoecd/41/33/38309896.pdf> (accessed 09.04.2011)

Ray, Debraj (1998) “Development Economics”, Princeton University Press, Princeton New Jersey

Rosenstein-Rodan, Paul N. (1943), “Problems of Industrialization of Eastern and South-Eastern Europe”, The Economic Journal, Vol. 53 No. 210/211 (June-September, 1943), pp. 202-211.

Rosenstein-Rodan, Paul N. 1966, “Notes on the Theory of the Big Push” in “Economic Development for Latin America”, edited by Howard S. Ellis and Henry C. Wallich. New York: St. Martin’s, 1966

Sachs, Jeffrey. 2005, “End of poverty, how we can make it happen in our lifetime”, The Penguin Press.

S&P 2011, Sovereign rating, <http://www.standardandpoors.com/ratings/sovereigns/ratings-list/en/eu/?sectorName=Governments&subSectorCode=39&subSectorName=Sovereigns> (accessed 24.03.2011)

Standard & Poor’s 26.06.2007, “General: Principles of Corporate and Government Ratings”, Government Credit Ratings:
<http://www.standardandpoors.com/prot/ratings/articles/en/eu/?assetID=1245292923941> (accessed 24.03.2011)

te Velde, Dirk Willem and Michael Warner, 2007. “Use of subsidies by Development Finance Institutions in the infrastructure sector”. Overseas Development Institute (ODI) Project Briefing, No 2. Available at:
<http://www.odi.org.uk/resources/details.asp?id=433&title=use-subsidies-development-finance-institutions-infrastructure-sector>

Varian, Hal R. (1992) “Microeconomic Analysis”, third edition, University of Michigan, W. W. Norton & Company, Inc.

World Bank 2010, “Doing business; Economy Rankings”,
<http://www.doingbusiness.org/rankings> (accessed 24.03.2011)

World Bank (2003) “Multilateral Development Banks”
<http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,contentMDK:20040614>

~menuPK:41699~pagePK:43912~piPK:44037~theSitePK:29708,00.html (accessed 16.04.2011)

UN (2010) “Unemployment, Underemployment and Vulnerable Employment in West Africa: Critical Assessment and Strategic Orientations”, United Nations Economic Commission for Africa Sub Regional Office for West Africa, March 2010.

UN (2003) “Monterrey Consensus on Financing for Development”, paragraph 39-42. Available at <http://www.un.org/esa/ffd/monterrey/MonterreyConsensus.pdf>

United Nations Millennium Development Goals (UN MDG), 2010, <http://www.un.org/millenniumgoals/poverty.shtml> (accessed 26.03.2011)

Yuko, Kinoshita (2001) “R&D and Technology Spillovers Trough FDI: Innovation and Absorptive Capacity”, Discussion Paper Series, No. 2775, Center for Economic Policy Research

Appendix

Table 2: Foreign Direct Investment, net inflows

Foreign Direct Investments, net inflows,(BoP current US\$)					
	<i>Leased Developed Countries Africa</i>				
	2005	2006	2007	2008	2009
Angola	-1 303 836 930	-37 714 860	-893 342 152	167 897 101	2 205 298 180
Congo		256 100 000	1 808 000 000	1 726 800 000	951 400 000
Ethiopia	265 111 675	545 257 102	222 000 573	108 537 544	221 459 581
Lesotho	92 598 454	113 046 841	130 344 464	72 358 240	62 922 349
Mali	223 803 090	83 392 283	72 794 530	180 281 493	109 101 017
Rwanda	8 030 000	11 233 067	67 142 879	103 350 000	118 671 745
Somalia	24 000 000	96 000 000	141 000 000	87 000 000	108 000 000
Uganda	379 808 341	644 262 500	792 305 781	728 860 901	603 749 197
Benin	53 043 962	53 200 471	255 244 061	173 827 894	92 548 275
Central Africa Republic	32 419 028	34 615 311	56 737 589	117 119 138	42 250 531
Djibouti	22 203 341	108 287 709	195 351 140	227 654 582	96 859 685
Gambia	51 930 776	82 069 399	72 588 860	70 102 535	39 447 691
Liberia	51 930 776	107 856 734	131 637 709	394 536 077	217 803 416
Muritania	814 100 000	105 500 000	138 300 000	338 400 000	-38 300 000
so Tome and Principite	15 672 638	38 015 839	22 028 528	56 743 389	7 500 000
Zambia	356 990 000	615 770 000	1 323 900 000	938 620 000	699 150 000
Sudan	2 304 640 000	3 534 080 000	2 425 590 000	2 600 500 000	2 682 180 000
Burkina Faso	34 151 835	33 594 064	343 535 023	137 093 641	171 407 576
Chad	-99 342 519	-279 217 426	-69 481 103	233 583 814	461 808 153
Equatorial Guinea	769 146 185	469 506 015	1 242 731 087	-793 872 333	1 636 219 625
Guinea	105 000 000	125 000 000	385 900 000	1 256 060 000	49 820 000
Madagascar	85 444 105	294 216 496	777 477 747	1 112 366 906	1 384 364 077
Mozambique	107 853 319	153 728 085	427 430 920	591 619 897	881 229 333
Senegal	44 588 475	220 319 715	297 427 248	706 000 000	207 545 332
Tanzania	494 050 000	596 950 000	646 971 529	400 047 237	414 544 625
Burundi	584 702	31 594	500 245	3 833 208	348 405
Comoros	558 644	576 284	7 522 604	7 521 125	9 089 626
Eritrea	-1 040 000	450 000	-110 000	-233 333	35 556
Guinea-Bissau	8 692 468	17 724 566	18 768 253	15 000 000	13 958 561
Malawi	52 327 161	72 192 866	92 055 126	170 027 937	60 447 137
Niger	43 976 116	50 544 081	129 038 778	147 000 000	738 903 737
Sierra Leone	83 182 315	58 768 035	96 577 832	57 623 740	74 293 786
Togo	76 992 328	77 335 561	49 162 598	68 000 000	50 127 105
SUM	5 198 610 285	8 282 692 332	11 407 131 849	12 204 260 733	14 374 184 301

	<i>Leased Developed Countries Asia</i>				
	2005	2006	2007	2008	2009
Afghanistan	271 000 000	238 000 000	243 000 000	300 000 000	185 000 000
Bangladesh	813 321 972	697 206 284	652 818 719	1 009 623 164	674 246 908
Bhutan	9 000 000	6 100 000	73 300 000	29 700 000	36 366 667
Cambodia	381 180 191	483 209 383	867 288 539	815 180 218	530 151 578
Lao PDR	27 700 000	187 400 000	323 500 000	227 700 000	318 598 209
Maldives	9 492 278	13 868 219	14 977 676	134 793 823	112 323 050
Myanmar	237 242 950	278 634 107	257 686 000	283 454 600	322 975 867
Nepal	2 451 785	-6 647 984	5 741 706	995 124	38 176 181
Yemen	-302 056 737	1 120 975 102	917 299 000	1 554 624 168	129 193 634
SUM	1 449 332 439	3 018 745 111	2 438 312 640	4 356 071 097	2 347 032 094
	<i>LDC Australia and the Pacific</i>				
Kiribati	760 000	12 930 499	-8 280 000	1 945 507	2 198 669
Samoa	-2 983 211	-2 983 211	6 821 727	12 209 184	3 029 883
Solomon Islands	18 580 467	34 078 162	64 430 071	76 000 000	117 645 530
Haiti	26 000 000	160 600 000	74 500 000	29 800 000	37 950 000
Vanuatu	13 251 642	43 447 012	34 155 235	34 000 000	27 393 768
SUM	55 608 898	248 072 462	171 627 033	153 954 691	188 217 850
	<i>LDC Caribbean</i>				
	2005	2006	2007	2008	2009
Haiti	26,000,000	160,600,000	74,500,000	29,800,000	37,950,000

Source: World Bank (2010)¹³

The countries are classified by the definition of LDCs formulated by the United Nations as mentioned in the introduction.¹⁴

¹³ Data available at: <http://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD/countries/AO-CV-LS-ML-RW-SO-UG?display=default> (accessed 15.03.11)

¹⁴ List of countries: <http://www.unohrrls.org/en/ldc/related/62/>